

**USAID FY 2003 Activities in Support of the
U.N. Convention to Combat Desertification
(UNCCD)**

March 2005

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U.S. RATIFICATION OF THE CONVENTION TO COMBAT DESERTIFICATION

The United States ratified the U.N. Convention to Combat Desertification on November 17, 2000, and it entered into force on February 15, 2001. The Congressional Resolution of Advice and Consent for the CCD set forth, *inter alia*, the following understandings, included in the U.S. instrument of ratification:

1. as a developed country party, the United States is not obligated to satisfy specific funding requirements or other specific requirements regarding the provision of any resource, including technology, to affected country parties,
2. the Convention does not impose mandatory obligations to provide funding for the Global Environmental Facility (GEF); and
3. no changes to existing US. Land management practices and programs will be required to meet obligations incurred under the Convention.

USAID AND IMPLEMENTING THE UNCCD OBJECTIVES

The United States Agency for International Development (USAID) is the lead USG agency implementing the UNCCD overseas. The tenets of the Convention, calling for a bottom-up and participatory approach to combating desertification, echo the focus of USAID's approach to natural resource management (NRM), improved agriculture practices, and integrated water resource management (IWRM). The mainstay of USAID's involvement in the CCD is carried out through its Mission and Washington-based activities that address the root causes of desertification.

USAID addresses the goals of UNCCD through programs that address sustainable agriculture, improved agricultural practices, natural resource management, conservation of natural resources and integrated water management in arid, semi-arid and dry sub humid habitats.

USAID and its partner organizations focus on building the capacity of communities and local institutions to utilize new technologies and tools to improve management of agricultural lands and natural resource areas. Community based natural resource management (CBNRM) promotes the devolution to, and capacity of communities to effectively manage their resources.

The information in this report is representative of U.S. activities that support the tenets of the UNCCD in FY 2003. The funding levels in the report are conservative approximations of the agriculture and environment programs that are attributable to combating desertification.

Direct support to UNCCD related meetings: FY 2003: \$120,000

In February 2004 USAID and CILSS co-sponsored a workshop in Ouagadougou aimed at helping West African countries to include more information about NRM impacts in their Country Reports to the CRIC. Participating at the workshop were senior CILSS officials and senior NRM practitioners from Burkina Faso, Niger, Guinea, Senegal, Europe, and the U.S. While CILSS countries have achieved substantial progress in the NRM sector over the last ten years, few of the impacts were reported in the last round of Country Reports. This omission reduced peoples' awareness of the role that NRM has played in improving livelihoods, reducing poverty, strengthening local governance and reducing land degradation. There was a concern that this lack of awareness would marginalize NRM's integration into economic growth, poverty reduction (including the poverty reduction strategies papers) and Democracy and Governance (particularly decentralization) strategies.

The workshop was organized around NRM Assessments conducted in Burkina Faso, Mali, Guinea, Niger, and Senegal. These Assessments summarized trends and impacts produced over the last ten to twenty years.

Discussions were held on how the information and analyses could be used in fora that engaged the broader development community, especially those in the Economic Growth, Poverty Reduction, and DG sectors who typically do not see the potential for NRM to help them do their jobs better.

Proposals produced by the workshop included revisits to NRM Assessments conducted by CILSS fifteen years ago in order to track whether various initiatives have been scaled up, remained the same or disappeared. The proposal was presented June 23-24 2004 in Paris at the World Bank's TerrAfrica presentation and discussed further at meetings in Bonn with the Secretariat. It was decided that a side event would be held at the CRIC to present findings of field Assessments of NRM progress.

Supported by the FRAME Program, CILSS sponsored a team that visited communities in Niger that had transformed unused land into productive agricultural lands through the use of soil and water conservation measures. CILSS, supported by FRAME, GTZ and other donors, invited UNCCD Focal Points from West Africa to a workshop to hear from the Assessment team and discuss the findings. It was decided at that workshop to (a) continue the "Stocktaking" approach in other member countries and (b) to strengthen the economic analysis of the Assessments. A Ghana Assessment is planned for April 2005. In addition, an interactive site is being set up on the FRAME website to host a discussion amongst Focal Points on NRM Assessments. It will be moderated from West Africa.

ACTIVITIES IN SUPPORT OF COMBATING DESERTIFICATION

USAID bilateral programs are developed in consultation with host country government officials and civil society stakeholders. The programs described below are representative of the priorities outlined in those discussions.

Angola - FY 2003: \$ 537,000

USAID's activities focused on working with Angolan farmers to increase crop production. The Rural Group Enterprise and Agricultural Marketing Project aimed to improve agricultural productivity, increase rural incomes, and improve food security of the rural poor through agriculture extension training in FY 2003.

The Food Security P.L. 480- and USAID/ChevronTexaco-funded Development Relief Program (DRP) – a public-private alliance which began in April 2003 – implemented a range of strategies to promote agricultural recovery and reestablishment of farm-based livelihoods. DRP activities included the distribution of food to protect crop production; for instance, ration distributions in May 2003 extended the life of food reserves thus preventing the consumption of immature crops and in destroying trees to engage in alternative livelihoods such as charcoal production. These agriculture activities combat desertification by reducing unsustainable resource use and harmful land-use practices while simultaneously addressing Angola's critical food security situation.

Benin - FY 2003: \$ 67,000

In FY 2003, USAID helped increase the productivity of small-scale farmers and traders in Benin by promoting technologies to improve agricultural practices and increase incomes. An important part of this program has been the promotion of fuel-efficient stoves. In 2002-2003, 36,243 stoves were sold to Beninese consumers, saving an estimated 28,377 tons of cooking charcoal. This reduction in charcoal translates directly into environmental benefits, since less wood was harvested to convert into charcoal. In addition to environmental benefits, the program contributed to economic, educational, and health benefits as well. Stove manufacturers earned approximately US\$112,000, and household consumers saved a total of US\$3,723,786 – savings that studies show were directed to children's health and education.

Ethiopia - FY 2003: \$ 2,000,000

USAID contributes to combating desertification in Ethiopia by supporting efforts to improve watershed management, enhance food security and agricultural development and generate/adopt appropriate technologies in the areas of crop production and natural resources management. Beneficiaries of these activities include the 2.4 million chronically food insecure people of the Amhara Region. Two micro-watersheds in the Amhara Region are serving as pilot sites for interventions to develop tools for appropriate land use planning, sustainable management of natural resources, improved agricultural production, and environmental rehabilitation. Programs are also improving the knowledge base of Ethiopia's agricultural and livestock sectors and providing technical training and technology transfer for improved agricultural methods.

In addition, through Title II, USAID partners constructed 1,035 km of soil conservation structures and trained 5,260 farmers in irrigation practices, soil and water conservation, field crops, horticulture, and agro-forestry. In FY 2003, Title II programs began to address the root causes of Ethiopia's perpetual livelihood crisis through a multi-faceted approach that included improving agricultural practices. Two aspects of this program include an early warning system for pastoral populations and another early warning system across the entire Somali region.

Eritrea - FY 2003: \$ 6,516,000

USAID helps prevent desertification in Eritrea by supporting activities in rural areas to improve water access and reduce chronic food insecurity. The agency supported small and medium enterprises engaged in agricultural and other rural activities through medium-term loans and through water/sanitation activities that improved access to safe water for household consumption and crop and livestock production.

In addition, USAID supported water and sanitation activities with the objective of helping families in the Northern Red Sea zone cope with the ongoing drought. Ten community-level water/sanitation committees were formed and new water systems were created in six sites. USAID also funded the establishment of household vegetable gardens for family consumption and commercial production, bore hole construction to supply kitchen gardens and domestic needs, construction of a spate irrigation system; and training in water resource management. Through P.L. 480 Title II, USAID is supporting a five-year activity involving spate irrigation, which aims to increase agricultural productivity and household food security. P. L. 480 Title I Food For Progress funds are used for construction of water storage facilities to capture rainfall and prevent erosion, water conservation training, and improved watershed management.

Ghana - FY 2003: \$1,663,000

In Ghana, USAID helps prevent desertification by supporting activities affecting local and regional energy use. Two components of Ghana's Increased Private Enterprise Performance Program focus on local and regional energy use, directly affecting dependence on fuelwood. At the household level, USAID promotes energy-saving stoves designed to reduce charcoal use. It is estimated that households have saved more than \$800,000 by using the efficient stoves, and manufacturers have grossed approximately \$50,000. Complementing these economic benefits, reduced charcoal use also translates directly into environmental benefits as less wood is converted into charcoal.

At the regional level, the mission contributed to efforts to increase the use of natural gas through work with the West African Gas Pipeline (WAGP). Bringing the WAGP into operation will provide a stable energy source for Ghana and can help reduce dependence on clearing wood for fuel.

In addition, under a Title II program established to meet Ghana's food security needs, USAID supports community agroforestry and afforestation efforts. With program support, approximately 14,000 farmer households were trained in agroforestry techniques including improved seedling

management, sustainable tree nursery systems, proper spacing and alignment of tree crops, and proper fertilizer use.

USAID also supports biodiversity conservation in Ghana by promoting community-based ecotourism activities in environmentally sensitive rural destinations throughout the country. The activity is a collaborative effort between the Nature Conservation Research Centre – NCRC, the Ghana Tourist Board (GTB), United States Peace Corps – Ghana, Netherlands Development Organization – SNV, and the project communities. Implemented activities create opportunities for rural communities to earn income and provide tourism jobs through the conservation of ecosystems and avoidance of unsustainable extractive exploitation. The project has developed 14 community-based ecotourism destinations.

Guinea - FY 2003: \$900,000

In Guinea, USAID-supported activities to facilitate the adoption of improved agricultural practices and to promote community-based forest management have contributed to efforts to combat desertification. In FY 2003, USAID funds strengthened the natural resource management capacity of community-based organizations, encouraged better business and trade by promoting small enterprise development, promoted appropriate agricultural production and marketing technologies, and fostered a favorable policy environment. These measures played a critical role in placing over 50,000 hectares of farmland under improved management. Three P.L. 480 programs also helped fight desertification in FY 2003 by providing training in improved agricultural techniques in three of Guinea's most impoverished zones, thereby working to ensure food security.

Kenya - FY 2003: \$3,000,000

In Kenya, USAID helped combat desertification by supporting efforts to improve land management. USAID's conservation efforts focus on areas within and adjacent to strategic national parks and reserves. The program supports efforts that lessen, reverse, or halt the unsustainable use of the natural resources base through an integrated approach addressing the economic, policy, cultural, and human resource capacity challenges of conservation.

The program focuses on influencing community behavior change by promoting favorable incentives to improve natural resources management. Activities include: land improvement programs such as agroforestry, watershed, and range improvement activities; the promotion and development of nature-based businesses; building a constituency for conservation among Kenyan citizens; and supporting the management of protected areas.

As a result of agency funding, Kenyan communities and landowners brought 65,600 hectares of land under improved use in FY 2003. For example, the Koiya, Kuri Kuri and Kijabe group ranches observed positive land use changes in the conservation areas. Increased number of trees, more flowers, increase honey production and availability of water due to springs coming up. Wildlife numbers are increasing as grassland quality improves.

USAID also funds the Forest and Range Rehabilitation and Environmental Management Support Program (FORREMS). The program's goals are to reverse forest and rangeland degradation, expand the use of sustainable forest-based enterprises, and empower constituencies to implement Kenya's Environmental Management and Coordination Act. Activities include natural resource planning, establishing tree nurseries, training communities in range planning and rehabilitation, conducting forest inventory, and training forests guards in fire management.

USAID also contributed to efforts to combat desertification by addressing food security issues in Kenya's arid and semi-arid regions, the areas in the country most vulnerable to climatic shocks. The PL 480 program made progress in this respect, providing training in improved agricultural techniques and relevant business/marketing skills. In 2002-2003, the estimated average income in PL 480 Title II areas increased by 1.4% to 51% for households assisted by five of the six participating partners.

Liberia - FY 2003: \$1,000,000

USAID's assistance in rehabilitating the agricultural sector, has indirectly contributed immensely to efforts aimed at combating desertification in Liberia. Two international non-governmental organizations (LWF/WS-Lutheran World Federation/World Service and WVI-World Vision Liberia) worked with organized community-based organizations, farmers' associations, as well as individual small-scale farmers and IDPs in rural Liberia (Montserrado, Margibi, Bong, Grand Bassa, and Nimba Counties, etc.). Activities have focused on training, provision of agricultural inputs, micro-enterprise development and technical backstopping. Activities have focused also on formulating mitigation measures to minimize adverse effect on the environment.

Another project, the Agricultural and Economic Livelihood program of the Community Peace Building and Development (CPBD) Initiative, developed radio programs with agricultural production, health, civil society development, peace building and economic themes. These are broadcast in local languages. The CPBD provides financial and technical assistance to NGOs, CBOs and community radio stations, and promote activities related to coalition building, and resource mobilization in the NGO sector. The CPBD program also developed a recovery strategy in 2003 for 28 communities to provide food relief through food-for-work [referred to in Liberia as food-support to local initiatives (FSLI)] activities that evolve through community decision making.

Madagascar FY2003: \$1,350,000

USAID's activities help fight desertification in Madagascar by limiting deforestation and destruction of forest resources. By promoting an eco-regional approach that integrates conservation and development and encourages collaboration among key stakeholders, USAID supports biodiversity conservation, forest management planning, environmental policy development, and institutional strengthening for environmental organizations.

USAID also seeks to strengthen Malagasy environmental governance through improved policies, legislation, and procedures. USAID has supported reforms for a strengthened public environmental review process and better integration of environmental factors into investment decisions. New leadership at Madagascar's Forest Service has placed greater emphasis on

conservation, good governance, and improved relations with the private sector; within this context, USAID helped to refine a strategic vision and zoning plan for Madagascar's forests. USAID has also supported the use of information for decision making, including Regional State of the Environment for areas of desertification.

During FY 2003, USAID mobilized a Global Development Alliance between USAID and a mining company, QIT Madagascar Minerals in the southeast region of Anosy. This public-private partnership integrates social, economic, and environmental dimensions into a development framework and implements conservation and development activities to minimize pressures on the unique biodiversity of the region.

Malawi - FY 2003: 1,937,000

USAID contributed to efforts to combat desertification in Malawi by supporting improved agricultural production, community-based natural resources management, and the increased use of fuel-efficient stoves. USAID implemented two Global Development Alliances that contributed to economic growth, one of specific relevance to fuelwood-related deforestation. USAID supported a local firm that manufactures alcohol-based cooking stoves, known as “gelfuel”. With firewood the main source of fuel for most Malawian households, an expansion of the market for such stoves could have an important impact in reducing deforestation in Malawi.

FY 2003 was also the last full year of the five-year Community Partnerships for Sustainable Resource Management (COMPASS) activity to help communities adopt community-based natural resources management (CBNRM) practices. By year’s end, the number of communities adopting CBNRM practices in target districts grew to 600, 31% above FY 2002 levels. Over 1,867 individuals (27% of whom were women) participated in trainings in CBNRM techniques under COMPASS. Women’s participation in COMPASS activities increased proportionately over the previous year, reflecting efforts to better target training to influential female community members.

In addition, through the National Smallholder Farmer Associations of Malawi (NASFAM), a nationwide umbrella organization of 34 separate farmers’ associations, USAID continued to link low-income farmers to markets. Sales of non-traditional cash crops, including rice, groundnuts, paprika, cotton, and chilies, by over 95,000 farmer association members grew by 40%. Of particular note has been the success in production and export of high-quality groundnuts. During the late 1980s and early 1990s, Malawi’s groundnut export industry faltered. In the past few years Malawi has begun to reestablish its dominance with high-value groundnuts suited to the confectionary industry. Largely as a result of a strategic alliance between NASFAM and the International Center for Research on the Semi-Arid Tropics, the volume of groundnuts marketed by farmer associations in FY 2003 reached 836 metric tons.

In addition, through P.L. 480 Title II programs, a consortium of eight NGOs is building on the experience of the Consortium for the Southern Africa Food Emergency to develop a new Development Assistance Plan to begin in FY 2005. USAID continues to collaborate closely with

the NGO consortium in order to maximize the potential for shared objectives and complementary activities.

Mali – FY 2003: \$1,200,000

USAID contributes to efforts to combat desertification in the Sahel by supporting improved natural resources management and the use of fuel-efficient stoves in Mali.

With USAID assistance, the number of farmers in the Upper Niger Valley Office (OHVN) zone adopting improved natural resource management (NRM) practices to increase production and protect the natural resource base continues to grow. During FY 2003, USAID supported an impact assessment study and training of OHVN staff on extension activities and NRM impact assessment methodologies. According to this study, farmers increased crop yields significantly (30 to 100%) due to the implementation of natural resource management technologies. The study noted significant reduction in erosion and increase in vegetation cover over previously abandoned fields. Shifting cultivation practices are slowly being replaced by continuous intensive farming practices. Thanks to the new improved techniques, Malian farmers can increase their productivity while reducing the negative impacts of their land use.

The USAID supported EnterpriseWorks Worldwide (EWW) program continues to show impressive results through its promotion and sale of increasingly efficient charcoal burning stoves. During FY 2003, a new more efficient wood burning stove was launched. The number of stoves sold in 2002/2003 was 14,000, a 7% increase over the previous year's sales. The impact of these stoves on the environment is noteworthy. According to EWW's estimates, the total number of stoves sold during the program period (approximately 73,500) should save about 24,000 hectares (ha) of forest, a crucial step in combating desertification.

USAID's support to improved decentralized governance also furthers efforts to combat desertification by supporting improved natural resources governance. USAID's strategy is to help establish a governance system that brings all legitimate actors – state, civil society, and private sector – together to participate as partners in local governance. Activities aim to strengthen the national macro-political environment and to support the effective implementation of decentralization. This includes the decentralization of natural resources management. USAID and partners are working with the government to facilitate the transfer of responsibility in three sectors: potable water, education, and health.

Building off SO 2, the Accelerated Economic Growth program aims to increase productivity and incomes in selected agricultural sub-sectors of Mali. This strategy focuses on three inter-related areas: increased agricultural products; trade of selected commodities; and improvement of agribusiness, microfinance and macro-bank sectors.

USAID also developed an alliance among the West Africa Water Initiative, the government of Mali, World Vision, and local partners to provide drinking water and irrigation potential for rural communities. Eight solar pedalflo pumps have been installed in Segou, Mopti and Kalabancoro regions to allow about 3,500 rural farmers (of whom 75% are women) to access potable water and undertake income-generating activities.

Namibia - FY 2003: 2,037,000

In Namibia, USAID's contribution to combating desertification focuses on supporting community-based natural resources management (CBNRM) efforts. An estimate of direct and indirect contributions of CBNRM-assisted enterprises to the national economy is \$5.54 million. This figure includes revenues generated by joint venture lodges, sustainable trophy hunting, thatching grass sales, and other sources. The portion of these revenues accruing directly to conservancies was estimated at \$1.76 million, exceeding the FY 2003 target by 248%. Job creation also expanded with 542 full-time jobs and 2,933 part-time jobs created in conservancy areas. A total of 95,495 individuals, an increase of 84% over 2002, were recipients of CBNRM-generated income and other benefits.

The total number of hectares under conservancy management in FY 2003 numbered 7,405,200, an 81% increase since 2002. Annual game counts reveal continued burgeoning growth in wildlife populations, and game species are expanding their range southwards into new southern tier conservancies. The Event Book System and the Incident Book System tools, which provide critical data for managing game, have been further refined as a best practice and are currently in use in 31 conservancies. Sister sites in Zambia, Mozambique, and Botswana are now incorporating these tools into their own CBNRM programs.

Sustainability of the program was enhanced through the institutionalization of a CBNRM curriculum at the Polytechnic of Namibia (PON). The Namibia Association of Community Based Natural Resource Management Service Organizations (NACSO) worked closely with the PON in the design and production of a CBNRM module for the Nature Conservation Bachelor of Technology Degree. Namibia's other major tertiary institution, the University of Namibia, also developed a series of research seminars related to the CBNRM program, and began to coordinate research activities with Namibia Association of CBNRM Service Organizations' (NACSO) and Namibia's Ministry of Environment and Tourism (MET). Both achievements are consequences of advocacy work by the Institutional Working Group (IWG), supported by USAID.

MET, NACSO, and IWG also made progress in developing financial management and administrative systems, and in introducing conservancy governance and operation systems. In FY 2003, MET established a conservancy association to expedite communication and information flow between itself and conservancy leadership, representing a positive step toward building a government-supported national program and a key network for inter-conservancy cooperation.

Nigeria - FY 2003: \$750,000

USAID's program contributes to efforts to combat desertification in Nigeria by supporting agricultural development through improved policies, agricultural technologies, and market opportunities for agricultural products. The agency's agriculture program focuses on enhancing productivity, increasing private sector input marketing, and developing commercial market linkages. The targeted food crops in northern Nigeria are mainly sorghum and cowpea. In FY 2003, approximately 4,000 farmers received assistance to increase agricultural productivity. Farmers' access to improved agricultural inputs, including fertilizer, credit, crop protection products, high yielding and stress resistant crop varieties, post harvest technologies and

agribusiness skills was enhanced. In three villages in Katsina state, USAID trained over 450 farmers in cooperative business development skills, qualifying them to obtain loans received in FY 2002. The credit enables the farmers to purchase yield-enhancing inputs such as improved seeds and fertilizers that increased productivity and income and the loans have been fully repaid. Overall, the USAID-supported Rural Sector Enhancement Program, working in Katsina and three other states, assisted farmers to increase revenues from direct sales of crops to agricultural markets and processors from \$2.4 million in 2002 to \$2.9 million in 2003. In Kano, Kaduna, Jigawa and the Federal Capital Territory (FCT), a further 600 farmers who grew improved cowpea varieties demonstrated two to threefold productivity increases under local conditions, and net revenue gains of nearly \$600 per hectare.

Regional Center for Southern Africa (RCSA) - FY 2003: \$3,700,000

USAID contributes to efforts to combat desertification in Southern Africa by improving the enabling environment for cooperation in the management of shared natural resources. This was achieved through the establishment of three transboundary natural resource management areas (TBNRMAs) – Great Limpopo (South Africa, Mozambique, and Zimbabwe), Four Corners (Botswana, Namibia, Zambia, and Zimbabwe), and ZIMOZA (Zimbabwe, Mozambique, and Zambia). The program also supported more limited interventions in the Niassa-Selous reserve in Mozambique and Tanzania and the Okavango River Basin in Angola, Namibia and Botswana.

With assistance from USAID, Great Limpopo now has a joint management body, a joint management plan, and a signed tripartite treaty establishing the Great Limpopo Transfrontier Park. Specific accomplishments in FY 2003 include efforts to increase tangible benefits for local communities through the establishment of natural resource-based enterprises.

FY 2003 accomplishments in Four Corners included the completion of the Chobe Enclave Land Use Management Plan for the corridor between Chobe National Park and Caprivi. A joint effort with the U.S. Bureau of Reclamation improved infrastructure and fire safety in the area parks as well. CBNRM activities managed by USAID missions in Namibia and Zambia (to which RCSA has provided about \$2 million) also contribute to results at the community level in Four Corners.

In addition to these activities, the program also supported a Network for Capacity Building activity to enhance the ability of NGOs, community organizations, and government institutions to address regional environmental policy and natural resources management issues. Other natural resource management activities included Sharing Water in the Okavango River Basin, an effort to promote a shared data management system for the Okavango Basin.

USAID supports efforts to strengthen the production and commercialization of basic crops commonly grown by small farmers in Southern Africa. Partner institutions International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) and International Institute for Tropical Agriculture (IITA) have been distributing new crop varieties and technologies to farmers and helping farmers find commercial outlets for surplus production. Trade-related policy reforms and private sector involvement in technology transfer further advance the work. The activity focused on four crops – sorghum, millet, cassava, and sweet potato – that are less water-intensive

than maize. The increase in crop yields for the four products is equivalent to over 600,000 metric tons in Tanzania, Malawi, and Zimbabwe.

Information received previously indicated that families growing these drought-resistant varieties were less affected by the drought in 2001-2002 than other families, RCSA decided to verify this information with a field study. The study confirms that families growing drought-resistant crops are significantly better off.

On the policy side, RCSA supported activities to improve intraregional and international trade. This included sanitary-phytosanitary measures, seed certification, and to a limited extent grades and standards. In the food security crisis of 2002, the activities of the Food and Natural Resources Policy Analysis Network and the Famine Early Warning System Network (FEWSNET) identified the technical barriers to trade that were hindering the flow of foodstuffs and seeds across the region. In 2002-2003 RCSA funded FEWSNET to carry out its famine response activities. Initially, FEWSNET carried out rolling assessments in the six most affected countries. Now that the crisis has subsided, FEWSNET then reoriented its activities to strengthen early warning and food security networks, improve food security policy analysis, and create a new FEWS unit in Angola.

Senegal - FY 2003: \$1,500,000

USAID contributes to efforts to combat desertification in the Sahel by supporting improved forest management and agricultural production in Senegal. Senegal's new Agriculture and Natural Resources Management program applies a market-based approach to support the development of business partnerships to increase the number and scale of operations of small and medium-sized enterprises based on agricultural and non-timber forest products. By addressing the inter-related needs and opportunities related to private enterprises, conservation, and good governance, the program aims to overcome the shortcomings of earlier, sectoral approaches to agricultural development and natural resources management.

USAID supported the development of new opportunities for local enterprises to market non-timber forest products and non-traditional agricultural products, while also laying the foundation for the sustainable use of those resources. With field activities in the Tambacounda region only started in mid-2003, six natural products were identified as having immediate potential: baobab fruit, gum Mbep (*Sterculia setigera*), bamboo, honey, fonio and hibiscus. Eleven products of longer-term interest were also identified: charcoal, ecotourism, shea nut butter, horseradish tree (*Moringa olifera*), madd (*Saba Senegalensis*), wen (*Pterocarpus erinaceus*), tamarind, dankh (*Detarium microcarpum*), jujube (*Ziziphus mauritiana*), ron palm (*Borassus aethopium*), hay, and sesame.

USAID helped local producers form groups that can negotiate joint ventures and sign contracts with other businesses. Promising products include organic fonio, a local, native grain in high demand in Dakar, and the fruits of the Moringa tree which produce valuable oil and a nutritious herbal food supplement. A working relationship was established between a producer group and the Baobab Fruit Company, an Italian pharmaceutical firm that makes face creams and beauty

products from baobab products. As a result, the producer group secured a contract to provide 350 metric tons of baobab fruit at a price 75% higher than they were previously able to obtain.

USAID also contributes to efforts to prevent desertification by supporting the Government of Senegal in improving local government capacity. Through the agriculture and natural resources management (AG/NRM) component, USAID conducted inventories of Senegalese community-level organizations involved in natural resource management. The inventory was instrumental in building partnerships for local development strategies. It helped local-level governments develop relationships that provide a greater understanding of community-based forest management. As a result, local and central governments together co-manage 54,000 hectares of land, involving 68 villages.

Somalia - FY 2003: \$936,000

USAID is contributing to efforts to combat desertification in Somalia by supporting efforts to improve water use and by developing an early warning system in drought-affected areas. Through a three-year urban water development program implemented through UNICEF, USAID aimed to rehabilitate three major urban water facilities. Rehabilitation of the Boroma town water supply was completed in FY 2003, providing clean water to 120,000 beneficiaries.

In addition, the timely and accurate dissemination of early warning information led to a tailored U.N. assistance program for 1200 households in the drought-affected Sool Plateau region, and the development of a water rehabilitation program by an international NGO. Improved vulnerability analysis in the conflict-ridden Buale region led to effective humanitarian response by the ICRC. Data analysis, including remote sensing and market analysis, and comprehensive reporting improved decision-making and response planning. Training for 30 field monitors in remote sensing improved crop establishment analysis, enhancing response planning as a result.

USAID's support to vulnerable populations also contributed to efforts to prevent desertification. Activities improved access to safe water and sanitation, and increased the capacity for disaster preparedness and response. USAID partners, local authorities, and communities provided clean water access to over 293,300 people by repairing 116 urban water systems, rural bore-holes, and hand-dug-wells. The increased access to water generated opportunities for more productive livelihoods by strengthening an enabling environment for productive activities.

In addition, through USAID's Food for Peace program, a USAID-partner program facilitated the rehabilitation of 850 kilometers of farm-to-market roads and 410 kilometers of irrigation canals in FY 2003. The road rehabilitation led to improved linkages between communities and markets, and the canal rehabilitation led to more land being available for irrigation.

Sudan - FY 2003: \$250,000

USAID's food security and agricultural development and research activities in Sudan contribute to efforts to combat desertification in this drought-affected country. Food security in Sudan improved in many areas, especially southern Sudan, but a grave crisis in the Darfur regions

caused massive displacement for communities not yet recovered from droughts in prior years, and floods in northeastern Sudan caused extensive damage in Kassala state.

In previous years, USAID supported teams of southern Sudanese professionals to carry out research in agriculture and natural resource sectors under the Strategic Analysis Capacity Building program, implemented by USDA. In FY 2003, these studies were presented and debated under the auspices of the Pre-Interim Task Force on Agriculture and Natural Resource Management (NRM). This Sudanese-led dialogue with indigenous and external stakeholders in a number of sectors will lead to formulation of agriculture and NRM policies, laws and regulations that will support sustainable growth in southern Sudan during the six-year interim period of autonomy envisioned in the peace process. This increased southern Sudanese policymaking capability will also support the Nile Basin Initiative as it struggles to move from top-down planning to grassroots projects.

Tanzania - FY 2003: \$350,000

USAID's Natural Resources Management (NRM) program in Tanzania contributed to efforts to combat desertification by helping increase the area of land under conservation management, promoting policy and legislative reform, and supporting wildlife tourism.

FY 2003 concluded with the signing into law of the Wildlife Management Area (WMA) Regulations, which set forth procedures for community wildlife management and benefit sharing. Efforts to promote CBNRM and establish WMAs in Tarangire and Ugalla ecosystems achieved important progress. In Tarangire, 119,000 ha of land were brought under conservation management. Most of this new area is home to Tanzania's only indigenous hunter-gatherer people, the Hadzabe. The two Tarangire pilot WMAs each worked towards establishment. Baseline data were collected, and a regional sensitization workshop was held. At the village level, WMA and village land-law training, natural resource management by-law formulation, and land-use planning helped set the stage for effective community wildlife management in those areas. Efforts to expand conservation coverage succeeded as well: seven villages set aside 1,000,000 ha as a conservation area and another voted to set aside and manage 10,000 ha as part of an important wildlife corridor. In both these new areas, USAID will support village-level, land-use planning that rationalizes productive and conservation uses, and strengthens local management. Partnerships with local NGOs and the private sector also produced encouraging progress.

In Ugalla, 237,603 ha of land were brought under conservation management. In the ecosystem's two pilot WMAs, communities demarcated village and WMA boundaries, and prepared draft constitutions for community-based organizations (CBOs) that will manage the WMAs. Baseline surveys for both WMAs were also undertaken. USAID also promoted village forests as an alternative CBNRM approach under new forestry legislation.

With technical assistance from the US Forest Service (USFS), USAID initiated detailed assessments of the Lake Manyara and Tarangire watersheds in order to address concerns of habitat fragmentation and environmental degradation within the Tarangire-Manyara ecosystem.

In parallel with efforts to promote CBNRM in its target areas, USAID continued building local government knowledge and capacity to implement environmental laws, which are increasingly devolving rights and responsibilities to the local level. This year, over 200 district and municipal officials were trained. USAID also joined other donors in supporting broad environmental mainstreaming efforts, supporting revision of the environmental framework law, and sponsoring a national workshop on poverty-environment linkages. Part of this process will include conducting a public expenditure review for environmental activities that will help inform and rationalize budgeting for environmental management in, for example, the Tanzania Poverty Reduction Strategy and Agriculture Sector Development Plan.

Uganda - FY 2003: \$120,000

USAID promoted conservation tillage under the IDEA project to address the increasing pressure on land based resources, in particular: a) the destruction of woodlands for fuelwood and charcoal; and b) the encroachment of agriculture into marginal rainfall areas and sensitive ecosystems. Conservation tillage mitigates the negative environmental effects of the encroachment into drier, more marginal lands, thereby reducing activities that lead to desertification.

APEP has, in concert with collaborators such as Monsanto and SG2000, promoted conservation tillage in its various forms on approximately 18-20,000 acres. It is particularly important for the Teso and Busoga regions of Uganda, which are savanna. In these regions rainfall is becoming more erratic in terms of both the amount and timing of the rains. These regions receive less than 1000 mm of rainfall, spread over the two seasons (mid-March to mid-June and mid-August to the end of Nov.)

IDEA and APEP have introduced approximately 50,000 farmers to conservation tillage over the year, of which approximately 20,000 farmers have adopted the technology (at an estimated 1 acre per adopter). Conservation tillage is being used for maize, oilseeds, cotton, and upland rice. The practices IDEA and APEP have been promoting include zero tillage or reduced tillage, use of herbicides (pre- and post-emergence), the use of water catchment basins, the conservation of mulch, proper plant spacing, and partial intercropping or phased/overlap cropping.

In 2003, ECOTRUST, using USAID/Uganda money funded a community based organization called Rural Development Crusaders (RUDEC) to carry out tree planting, and soil water conservation activities in Masindi district. These included planting 60,000 trees on school land as well as on individually owned land, and constructing approximately 400 energy saving stoves. The trees were for both timber and firewood because Masindi being mainly a savannah, has serious deficits in both. RUDEC worked with 6 women organizations by giving them small grants to carry out similar activities.

Zambia - FY 2003: \$2,980,000

Desertification prevention in Zambia has benefited from USAID's support of improved agricultural processes. Following two years of drought, small scale farmers adopted conservation farming technologies and diversified their agricultural production base to take full advantage of

improved weather conditions and to maximize high value production, crop yields, and household food security.

The adoption of a wide range of improved agricultural technologies and improved management skills benefited 50,466 USAID-assisted farmers. The number of farmers employing conservation farming rose sharply during FY 2003 from 3,664 in the previous year to 30,802, significantly contributing to household food security and small farmer market participation. In addition to meeting their own food security needs, these farmers delivered \$717,001 worth of paprika, soya beans, and maize to local markets. In terms of reaching out to small scale farmers, over and beyond the results obtained in the country program, support from USAID's OFDA extended technology outreach to an additional 42,341 smallholder farmers, mainly in drought-hit Southern Province. OFDA funds enabled these additional farmers to employ small scale irrigation, improved seeds, fertilizers, drought tolerant cropping, and conservation farming to increase crop yields and improve their food security.

CENTRALLY FUNDED ACTIVITIES

The activities described below represent some of the work that is centrally funded out of USAID/Washington.

Consultative Group on International Agricultural Research (CGIAR) – FY03: \$6,938,000

USAID supports efforts to combat desertification through its contribution to the Consultative Group on International Agricultural Research (CGIAR). In a world where 75 percent of poor people depend on agriculture, new knowledge must be mobilized for creating agricultural technologies that promote growth, reduce poverty, and make more prudent use of the earth's dwindling natural resources. For over 30 years, CGIAR scientists and their collaborators have demonstrated the value of science-for-development partnerships.

- Scientists at the International Center for Agricultural Research in the Dry Areas (ICARDA) are drawing on indigenous knowledge for developing improved water harvesting techniques for arid areas (www.icarda.org)
- The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) headquartered in India has developed innovative techniques that use low-cost soil and water conservation structures to fight recurrent droughts, the leading cause of low crop yields in the dry tropics. The Desert Margins Program is developing sustainable land management practices that are helping reverse desertification (www.icrisat.org)
- Scientists at the Mexico-based International Wheat and Maize Improvement Center (CIMMYT) have released two maize varieties, Grace and Zm521, that provide 30 to 50 percent higher yields compared to traditional varieties and are suited for southern Africa's drought-prone and nutrient-depleted soils (www.cimmyt.org)
- The Africa Rice Center has developed New Rices for Africa (NERICAs) that are boosting rice yields in Sub-Saharan Africa and can better withstand drought and acidic soils (www.warda.org)

- The World Agroforestry Centre in Kenya is leading an effort to improve soil fertility by promoting the use of nitrogen-accumulating leguminous trees (*Sesbania*); scientists are also developing alternatives to slash-and-burn agriculture, a deleterious farming practice that reduces soil biodiversity and contributes to global warming (www.worldagroforestrycentre.org)

USAID funding to CGIAR in Africa - Attributed to UNCCD - 2003	
Center	Attributed (\$000)
CIAT	\$210
CIMMYT	\$1,000
CIP	\$158
ICARDA	\$725
ICRAF	\$120
ICRISAT	\$1,200
IFPRI	\$300
IITA	\$640
ILRI	\$2,100
IPGRI	\$125
IWMI	\$248
WARDA	\$113
	\$6,938

Soil Management Collaborative Research Support Program (CRSP) FY 2003: \$545,000

USAID supports a U.S. university program called the Soil Management Collaborative Research Support Program that has teamed up with NASA, USDA, and West African institutions to enable farming communities to capture water and reduce runoff by adopting a locally developed contour ridge-till farming system. This system encourages farmers to act in their self-interest in managing their natural resource base. The rain water management reduces farming risks and increases crop productivity. The system facilitates the sequestration of atmospheric carbon dioxide as soil organic matter. The sequestered carbon increases water infiltration into soils to recharge ground water and keeps village wells amply supplied with water.

SANREM CRSP West Africa FY 2003 \$680,000

The core element in the SANREM CRSP program in Mali has been the development of social capital and implementation of improved practices for managing natural resources and the conflicts generated around their use. The newly decentralized organ of local governance, the Commune of Madiama, was the stage for these efforts. The SANREM CRSP supported the creation of the Natural Resource Management Advisory Committee (NRMAC) and the training of village leaders elected to this commune level body through collaboration between locally based NGOs (CARE and GRAD), the deconcentrated government agricultural research center (CRRRA/Mopti), US universities (Virginia Tech and Washington State), and the NRMAC.

Some highlights include:

- Research demonstrated that Holistic Management grazing programs increase soil fertility, including carbon sequestration. This work contributed to the development of a soil carbon accounting system for grazing lands.
- Agricultural system simulations demonstrate that manure management strategies for sorghum and millet production are the most likely practices to assure sustainable production in the region over the next thirty years.
- A panel survey of men and women throughout the Commune of Madiama demonstrated increasing confidence in local government and decreased incidence of conflict.
- An open-ended survey of local leaders credited the NRMAC with reducing tensions in the community and thereby building the social capital necessary for further community efforts.

Dissemination activities involved conducting three workshops and making significant contributions to a fourth, the production of workshop proceedings, six papers presented at other venues, two NRM tools and accompanying user manuals, and a book Conflict, Social Capital and Managing Natural Resources.

Global Livestock CRSP –FY2003: \$126,000

The Livestock Early Warning System (LEWS) project has been developing a monitoring system to assess emerging trends in forage supply and animal condition on rangelands in Ethiopia, Kenya, Tanzania and Uganda. LEWS has developed anew forage forecasting technology that provides a comprehensive view of emerging forage conditions, as well as 90-day forecasts every 10 days. Predicting spatial forage availability will make it possible for pastoralists to assess impending livestock mortality by kind and class of animal and decline in milk production. With the new system, pastoralists will have more flexibility in decision-making, leading to timely destocking strategies and an assurance of greater ecosystem integrity. The primary goal of the GL-CRSP LEWS is providing pastoral communities and supporting organizations with timely and high-value assessments of emerging forage conditions. Information on current trends in forage on-offer to livestock and the rate of change for conditions across east Africa can be provided by projecting forage conditions from computer models (driven by satellite-based weather data) and coupling those projections with corresponding satellite forage greenness data. The methodology predicts grazed standing crop of forage in a response time series in 30, 60, and 90 day forage standing crop. This methodology is a powerful new mechanism for decision makers to identify emerging hot spots that may be difficult to perceive, and determine if they are going to recover or worsen with a progressive 90-day analysis window. The forecasts are well within normal sampling error, indicating that this new tool is valuable for predicting near-term forage.